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UNIVERSITY BULLETINS

THE UNIVERSITY REGISTER. Published in February.

ANNOUNCEMENT OF THE SCHOOL OF LAW. Published in March

ANNOUNCEMENT OF THE SCHOOL OF MEDICINE. Published in April.

ANNOUNCEMENT OF COURSES OF INSTRUCTION for 1915-16 with schedule of Lectures and Laboratory Work. Published in May.

ANNOUNCEMENT OF GRADUATE INSTRUCTION. Published in June.

INFORMATION CIRCULAR. Published in August.

SCHEDULE OF LECTURES AND LABORATORY WORK for 1915-16. Revised edition ready August 30. 10c.

DIRECTORY OF OFFICERS AND STUDENTS. Published in October and February. 15c.

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LELAND STANFORD JUNIOR UNIVERSITY

GRADUATE STUDY
1915-16

STANFORD UNIVERSITY, CALIFORNIA
PUBLISHED BY THE UNIVERSITY
JUNE, 1915

**STANFORD UNIVERSITY
PRESS**

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UNIVERSITY CALENDAR

1915

Aug. 30 Monday..... Registration of Graduate Students.
Aug. 31 Tuesday..... } Registration of Undergraduates.
Sept. 1 Wednesday..... }
Sept. 2 Thursday..... Instruction begins.
Nov. 25 Thursday..... } Thanksgiving Recess.
Nov. 28 Sunday..... }
Dec. 11-17 Saturday-Friday..... End-Semester Examinations.

1916

Jan. 10 Monday..... Registration of Graduate Students.
Jan. 11 Tuesday..... Registration of Undergraduates.
Jan. 12 Wednesday..... Instruction begins.
Feb. 22 Tuesday..... Washington's Birthday.
March 9 Thursday..... Founders' Day.
April 1 Saturday..... } Mid-Semester Recess.
April 9 Sunday..... }
May 11-17 Thursday-Wednesday..... End-Semester Examinations.
May 14 Sunday..... Birthday of Leland Stanford, Junior.
May 21 Sunday..... Baccalaureate Sunday.
May 22 Monday..... Commencement.

GENERAL STATEMENT

LOCATION

The seat of the University, except for the advanced and clinical work in Medicine, is at Stanford University, in the Santa Clara Valley, thirty miles southeast of San Francisco, on the Coast Division of the Southern Pacific Railway. The grounds of the University consist of over seven thousand acres, partly level and partly rising into the foothills of the Santa Cruz Range. The Bay of San Francisco lies about three miles east of the University grounds. Across the bay the Monte Diablo Range rises to a height of over four thousand feet, the Lick Observatory crowning Mt. Hamilton, the highest of the range. The Santa Clara Valley is one of the most attractive portions of the State in fertility, in natural beauty, and in the excellence of its climate. In winter the mercury rarely falls below 30 degrees, with an average midday temperature of about 55 degrees. In summer the midday temperature ranges between 60 degrees and 80 degrees, with occasional higher and lower numbers, the average being about 70 degrees; the nights are cool, the usual range being from 50 degrees to 58 degrees. The rainfall, normally about eighteen inches, is chiefly confined to the months from December to April, inclusive.

BUILDINGS

The central group of buildings, constituting two quadrangles, the one surrounding the other, is an adaptation of the Mission Architecture, and reproduces on an imposing scale the open arches, long colonnades, and red tile roofing of the old Spanish Missions of California. The Inner Quadrangle consists of twelve one-story buildings and the Memorial Church, connected by a continuous open arcade, and surrounding a court 586 feet long by 246 feet wide, or three and a quarter acres. The buildings are of buff sandstone, somewhat varied in color, the stonework of broken ashlar, with rough rock-face, and the roofs covered with red tile.

The fourteen buildings of the Outer Quadrangle are constructed of the same material and in the same general style as the Inner Quadrangle, with open arcades on the outside. The extreme length of the Outer Quadrangle is 894 feet.

The LELAND STANFORD JUNIOR MUSEUM, situated a quarter of a mile from the Quadrangles, on the west side of the Palo Alto Avenue, contains the archæological and art collections of the University.

The CHEMISTRY BUILDING, located between the Quadrangles and the Museum, consists of two separate structures—the main building and the Assaying Laboratory.

Behind the central quadrangles are located the workshops of the Engineering departments, experimental laboratories, etc.

The dormitories are east and west of the Quadrangles. ENCINA HALL, for men, is at the east, and has accommodations for three hundred students. ROBLE HALL, for women, is at the west, and will accommodate one hundred students. MADROÑO HALL, a frame building, at present leased to private parties, receives only women students. It will accommodate about thirty students.

The MEN'S GYMNASIUM is a brick building with a frontage of 330 feet, situated north of Encina Hall and near the athletic grounds. There are two main divisions separated by a small court. The drill hall is 120x65 feet, with hard maple floor. There are rooms for special exercises, shower and locker rooms in each wing, ample offices, and space for storage and laundry.

ROBLE GYMNASIUM, for women, is a frame building, equipped with the apparatus and appliances for physical training.

The UNIVERSITY INN is a frame building intended primarily as a University commons for students living on the campus.

The grounds immediately about the University have been reserved in part for experimental and ornamental purposes, in part as residence sites for members of the Faculty and others who may desire to live on the University campus.

The buildings of the MEDICAL DEPARTMENT in San Francisco occupy four fifty-vara lots bounded by Clay, Sacramento, and Webster streets, and consist of the Clinical and Laboratory Building; Lane Hospital, a modern building in brick and stone, with a capacity of one hundred and eighty beds; the Nurses' Home; and the Lane Library, a fireproof structure of Colusa sandstone, three and a half stories high, with steel stacks accommodating 60,000 volumes.

The buildings of the MARINE BIOLOGICAL LABORATORY are located at Pacific Grove. They consist of two two-story structures, and contain four general laboratories, one lecture room, seventeen private rooms for investigation, and a dark room for photography.

FOUNDATION

The Leland Stanford Junior University was established under an Act of the Legislature, approved March 9, 1885, entitled "An Act to advance learning, the arts and sciences, and to promote the public welfare by providing for the conveyance, holding, and protection of property, and the creation of trusts for the founding, endowment, erection, and maintenance within this State of universities, colleges, schools, seminaries of learning, mechanical institutes, museums, and galleries of art." The Founding Grant, executed November 11, 1885, was made public at a meeting of the Board of Trustees, held in San Francisco, November 14, 1885. The cornerstone of the inner quadrangle was laid May 14, 1887, and the institution opened to students October 1, 1891.

NATURE, OBJECT, AND PURPOSES OF THE UNIVERSITY

'We, Leland Stanford and Jane Lathrop Stanford, husband and wife, grantors, desiring to promote the public welfare by founding, endowing, and having maintained upon our estate known as the Palo Alto Farm, and situated in the Counties of San Mateo and Santa Clara, State of California, United States of America, a university for both sexes, with the colleges, schools, seminaries of learning, mechanical institutes, museums, galleries of art, and all other things necessary and appropriate to a university of high degree, to that end, and for that purpose, do hereby grant,' etc.

'And that the trust hereby created may be executed according to the wishes of the grantors and each of them, they do hereby designate the Nature, Object, and Purposes of the Institution hereby founded, to be:

'Its nature, that of a University, with such seminaries of learning as shall make it of the highest grade, including mechanical institutes, museums, galleries of art, laboratories, and conservatories, together with all things necessary for the study of agriculture in all its branches, and for mechanical training, and the studies and exercises directed to the cultivation and enlargement of the mind;

'Its object, to qualify students for personal success and direct usefulness in life;

'And its purpose, to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty regulated by law, and inculcating love and reverence for the great principles of government as derived from the inalienable rights of man to life, liberty, and the pursuit of happiness.'

THE UNIVERSITY FACULTY

Under the Articles of Organization, adopted by the Board of Trustees March 31, 1904, the power and authority of the University Faculty is vested in the Academic Council, consisting of the President of the University, the professors and associate professors, the librarian, the registrar, such assistant professors as have been upon the roll of the faculty for three years, whether as assistant professors or instructors, and such other officers of the University or members of the teaching staff as the Academic Council may, with the assent of the Board of Trustees, determine.

All general University regulations, statutes, and rules as to matters within the province of the faculty, must be initiated in and passed by the Academic Council. The Academic Council has general power and responsibility for the internal administration of the University, subject to express provisions contained in the Articles of Organization respecting the methods of exercising such powers through the President of the University, the Advisory Board, the Standing Committees, and the Department Faculties.

The Advisory Board consists of nine members of the rank of professor, one from each of the five department groups, and four chosen without reference to groups. All executive acts of general importance, such as recommendations for appointments, promotions, and dismissals, for the creation of new departments or chairs, etc., must be submitted by the President to the Advisory Board. The Advisory Board is also privileged to make such recommendations to the President, regarding policy, as it may decide by vote to be expedient, but no recommendations for appointments, promotions, or dismissals, may originate with the Advisory Board.

The Executive Committee of the Academic Council consists of the President, Vice-President, Registrar, and two members from each department group elected by the Academic Council. The Executive Committee appoints the Academic Committees of the Council.

The Standing Administrative Committees of the Council are appointed by the President subject to the approval of the Advisory Board.

The Department Faculties consist of the professors, associate professors, assistant professors, and instructors in the several departments, but only members of the Academic Council have the right to vote. A Department Faculty has direction of the work of instruction in the department and of the internal administration of the department,

subject only to such control as is vested in the Board of Trustees, the President of the University, and the Academic Council. The Executive Head of the Department Faculty is designated by the President with the approval of the Advisory Board and of the Board of Trustees.

DEPARTMENTS

The work of the University embraces the following departments, divided into groups for the purpose of elections to the Advisory Board and Executive Committee, as indicated:

(I) Greek, Latin, Germanic Languages, Romanic Languages, English; (II) Botany, Physiology and Histology, Zoology, Entomology and Bionomics, Medicine, Anatomy, Bacteriology and Immunity; (III) Psychology, Mathematics, Physics, Chemistry, Geology and Mining; (IV) Philosophy, Education, History, Economics, Law; (V) Applied Mathematics, Civil Engineering, Mechanical Engineering, Electrical Engineering.

The Marine Biological Laboratory, founded by the liberality of Mr. Timothy Hopkins, and located at Pacific Grove, on the Bay of Monterey, is a branch of the biological work of the University.

LIBRARY

The Library is housed in the Thomas Welton Stanford Library Building, which forms the central portion of the easterly half of the outer quadrangle façade. On the main floor are the general reading rooms, with accommodations for 220 readers, the reference room, serial room, and catalogue room. On the second floor are six seminary rooms, used exclusively by the Departments of Economics, English Literature, Germanic Languages, Greek, Latin, and History.

The Library is open during term time on week days from 8 a.m. to 10 p.m., except on Saturdays, when it is closed at 3:30 p.m.

During the short vacation the hours are from 8:30 a.m. to 4:30 p.m., Saturdays to 12:30 p.m., and during the long vacation from 9:00 a.m. to 4:00 p.m., Saturdays 9:00 a.m. to 12:00 m. The shelves are open to members of the faculty, and to students engaged in advanced work upon the recommendation of their instructors. Books, other than works of reference, not required for class use, are lent for a period of two weeks.

Including the departments of Law and Medicine the Library contains upward of 258,000 volumes. The income of the Jane Lathrop Stanford Jewel Fund, certain other special funds, and fees provide amply for its maintenance and growth. Noteworthy special collections are as follows:

THE JORDAN LIBRARY OF ZOOLOGY.—A collection consisting largely of works on ichthyology, to a considerable extent made up of a vast number of authors' separates, which have been accumulated by Chancellor JORDAN, bound in convenient form, indexed, and catalogued. The more voluminous publications, such as the works of Cuvier, Lacépède, Bloch, Bleeker, Gunther, and others, are well represented. These, supplemented by the proceedings of various societies and institutions, make a collection of books of great value to advanced students and investigators in ichthyology. The library is conveniently arranged, and is situated in the Zoology building near the laboratories and collections.

THE BARBARA JORDAN LIBRARY OF BIRDS.—A memorial collection presented by Chancellor JORDAN, and to which frequent additions are made. While some of the older texts are not represented, it is a good working library of ornithology and contains the principal modern works on the subject.

THE HOPKINS RAILWAY LIBRARY.—A collection of approximately 10,000 volumes and pamphlets dealing with the subject of transportation. In 1892 Mr. TIMOTHY HOPKINS, of San Francisco, presented to the University his private library on railroads, consisting of about 2,000 books, personally providing for its maintenance and growth for many years. At present there is an annual library appropriation for this purpose. The collection is shelved by itself in one of the seminary rooms. It is general in scope, intended to embrace all subjects touching on the building, maintenance, and operation of railways. It is especially rich in state and government reports, as well as in reports of individual railroads both in the United States and Europe, with much material pertaining to their history.

THE HILDEBRAND LIBRARY.—In 1895 the University acquired the library of the late Professor Hildebrand, of Leipzig, containing more than 5000 volumes and pamphlets relating largely to Germanic languages and literature, the seventeenth and eighteenth centuries being especially well represented, and including also a notable collection of three hundred old dictionaries. The value of the books is greatly enhanced by the manuscript notes of Professor Hildebrand.

THE THOMAS WELTON STANFORD AUSTRALASIAN LIBRARY.—A good working collection of books relating to Australia and New Zealand. It is especially rich in early voyages, travels, and descriptions. Several hundred volumes of parliamentary reports of the Australian states, the Commonwealth, and New Zealand, are included. The publications of

learned societies, such as the Royal Societies of New South Wales and Victoria, the Australian Museum, and the New Zealand Institute, are well represented, while considerable pamphlet material also is available.

BRITISH PARLIAMENTARY PAPERS.—An unusually complete set of British government documents from 1801 to date, some 6500 volumes, of which the first 3500 volumes constituted a special gift to the Library, made by Mrs. Stanford in 1900. The set contains not only the full papers laid before Parliament from the customary departments of government, such as diplomatic, colonial, and financial papers, but also the most valuable reports of the special committees and royal commissions, offering material for research in almost every field of knowledge. Taken in connection with the University's excellent set of United States Documents, and of the governmental publications of Canada, and of Australasia, the collection offers unusual facilities for study in the public undertakings of English-speaking peoples.

THE JARBOE COLLECTION ON THE FRENCH REVOLUTION.—Acquired in 1910. It contains original materials, principally in French, relating to the Revolutionary and Napoleonic era. Two features of the collection are of particular interest to advanced students of history—the original and contemporaneously printed pamphlets, of which many are unusual; and the memoirs, of which there is a comprehensive selection.

THE LANE MEDICAL LIBRARY.—Founded by the directors of Cooper Medical College in accordance with the bequest of Mrs. L. C. Lane. The Library contains over 40,000 volumes, and is particularly rich in its collection of medical and allied periodicals. The leading domestic and foreign journals are currently received. The new library building, erected in 1912, is a fireproof structure of Colusa sandstone, and is located opposite the other medical buildings, on the corner of Sacramento and Webster streets, San Francisco.

THE BRANNER GEOLOGICAL LIBRARY.—Room 333, Geology building. This collection contains over 30,00 books, pamphlets, and maps, relating chiefly to geology, mineralogy, paleontology, geography, exploration, metallurgy, and mining, including most of the state and government reports, and the publications of scientific societies in all parts of the world. Particulars regarding the sets may be seen at the Reference Desk in the general library.

ADMISSION TO GRADUATE STANDING

Graduates of institutions of recognized collegiate rank may be admitted to graduate standing in the University upon presentation of

diplomas or equivalent credentials. Admission to technical graduate standing does not imply admission to candidacy for an advanced degree (for the conditions of such candidacy see p. 16). If graduates of other universities desire to become candidates for the baccalaureate degree, the question of units required for graduation may be waived, upon approval of the Committee on Admission and Advanced Standing, and the degree conferred on the satisfactory completion of not less than thirty units of university work and the fulfillment of all major and minor requirements. Graduate students not candidates for any degree, may be permitted, upon the approval of the major department, to undertake such work as their previous training seems to warrant.

SPECIAL REGULATIONS GOVERNING ADMISSION OF WOMEN

The Founding Grant of the University, as amended May 31, 1899, directs "that the number of women attending the University as students shall at no time ever exceed five hundred." In conforming to this provision preference is given to graduate students, and they are assured of admission provided application (on blanks to be obtained of the Registrar) is made by August 15th (for the August-September matriculation) or December 20th (for the January matriculation).

AMOUNT OF WORK

Fifteen hours per week of recitations or lectures or equivalent laboratory or research work, constitutes an average semester's work. Graduate students are not held to any special number of unit hours, but registration will not ordinarily be permitted unless the student is prepared to devote at least half of his working time to University study.

TUITION AND INCIDENTAL FEES

There are no tuition fees for graduate students, except in Law and for candidates for the degree of Doctor of Medicine.

The Tuition Fee in Law is one hundred dollars per year; in Medicine, one hundred and fifty dollars per year. No tuition fee is charged for the fifth (hospital) year in Medicine.

There are no Incidental Fees for graduate students doing bona fide graduate work; all others pay an Incidental Fee of fifteen dollars per semester.

A Guild Fee of two dollars per semester is paid by all graduate students.

Students in laboratory courses pay for the materials which they

use, and in various courses syllabus and other fees may be charged. Laboratory and syllabus fees are different for the different courses, ranging from \$0.50 to \$25 per semester.

A Diploma Fee of five dollars is charged to all persons receiving degrees from the University.

COST OF LIVING

The cost of living in Roble Hall, including board, room, light, heat, and attendance, averages about \$28 per month. Students furnish their own linen, blankets, and towels. Requests for reservation of rooms should be made to the Matron of Roble Hall.

Rooms in Encina Hall cost \$6 per month, with two in a room; corner rooms, \$6.50. There are a few single rooms at \$8 per month. Students occupying a double room alone pay \$6 per month; but no double room may be occupied by one student when there is a vacancy in any other double room. Requests for reservation of rooms should be made to the Clerk of Encina Hall.

Students may live outside the Halls only in places approved by the University.

In Palo Alto and College Terrace, at an average distance of a mile and a quarter from the University, rooms and board, in private houses, can be obtained, at from \$25 to \$35 per month. A considerable number of students live in co-operative clubs, in which the cost of board and room is reduced as low as \$20 per month; such rooms are lighted and heated, but usually unfurnished. Special commutation tickets are issued by the Southern Pacific Company, and students living in towns on the line of the railway, from San Francisco to San Jose, easily go to and from the University daily. There is also trolley connection with San Jose, Los Gatos, and intermediate towns.

On arriving at the University, new students may obtain information of rooms and board at the Information Bureau conducted by the Christian Associations. A complete list of approved rooms and boarding places is printed in August. Particular inquiries may be addressed to the secretaries of the Christian Associations.

The University Inn, located near the Quadrangle, has dining accommodations for about three hundred students.

Books and stationery will average from eighteen to twenty-five dollars per year.

The necessary expenses of the student, exclusive of clothing and railway fares and of tuition fees in Law and Medicine, range from \$350 to \$500 per year.

The cost of living for students of Medicine in San Francisco is about the same as at Stanford University. There are numerous rooming and boarding houses near the medical buildings.

UNIVERSITY HEALTH CONTROL

The University exercises an advisory control over student health affairs through the Committee on Public Health.

REGULATIONS CONCERNING VACCINATION

Within three weeks of the day of registration every student must file with the Committee on Public Health a certificate, signed by the vaccinator, who must be a duly licensed and practicing physician, giving exact dates of vaccination, and showing either successful vaccination within seven years, or unsuccessful vaccination twice within the past twelve months.

Non-compliance with these requirements will result in a fine of two dollars after three weeks, and an additional fine of four dollars after five weeks, and cancellation of registration after seven weeks from the day of registration.

All certificates should be filed in person at the office of the Committee on Public Health. They will be returned upon request. "Conscientious objections" will not be recognized as exempting anyone. Unavoidable delay, or failure to secure a satisfactory certificate, will not exempt anyone from the fine.

"Immunity Reaction" will be considered equivalent to one unsuccessful try.

ROOM CARDS

Every student is required to present at the Registrar's Office, at the time of registration, a properly signed room card. These cards can only be obtained from the owner or manager of the house from whom the room is rented. They are supplied to the house owner or manager by the Public Health Committee if the room meets the University requirements. Students are cautioned to obtain their room card before making a binding agreement for the rental of room.

STUDENTS' GUILD

The Guild is a student organization which seeks to make provision for the care of all cases of serious illness among its members. This is now accomplished for non-contagious diseases, through an arrangement with the Peninsula Hospital at Palo Alto and, for medical students, with the Lane Hospital in San Francisco. For the care of con-

tagious diseases, provision has been made by the erection of a Detention Hospital on the University Campus.

All students are required to become members of the Guild by paying the fee, which is two dollars each semester. A uniform hospital rate of one dollar per day is charged all members of the Guild, in addition to such special charges as may be incurred for extra service.

SCHOLARSHIPS AND ASSISTANTSHIPS

There are a number of student-assistant positions in the various departments, held by either undergraduates or graduates, ranging in pay from \$500 to \$100 each, the average being about \$200. These do not include a considerable number of minor positions in laboratories or elsewhere where mere labor without skill or special knowledge is required, nor do they include those positions where the full time of the assistant is demanded.

Each department selects and recommends for appointment its own assistants. Requests for information as to pay and duties and applications for appointment should be addressed to the Executive Head of the department in which a position is sought.

GRADUATE LOAN FUND

The Alumni Association of the University has established a loan fund available to graduate students under the following conditions:

1. Loans shall be restricted to candidates for advanced degrees, including the A. M., J. D., M. D., and Ph. D. degrees, preference being given to candidates for the Ph. D. degree.
2. In making loans emphasis shall be placed upon character, scholarship, and intellectual promise, in addition to personal need.
3. Loans shall be repaid not later than one year after securing the degree or withdrawing from the university.

Applications should be made to the Academic Secretary, Stanford University, California.

THE ALUMNI JORDAN SCHOLARSHIPS

The Alumni Jordan Scholarship Fund has been founded largely by physicians who were at one time students of Stanford University. Its purpose is to pay the tuition fees of two or three medical students of high standing, with the understanding that at some future time the amount will be returned without interest. The student who once receives this scholarship loan will be entitled to its use throughout his medical course provided his work continues to be satisfactory.

THE BERNARD SCHOLARSHIP IN ENTOMOLOGY

Mrs. Matilda Bernard, widow of the late Henry M. Bernard of the University of Cambridge, England, has established an annual scholarship in Entomology. The purpose is to defray part of the expenses of a student, who, under the direction of the Department of Entomology, shall carry on an investigation in insect histology having some reference to the biological theories of the late husband of the donor of the scholarship.

THOMAS WELTON STANFORD FELLOWSHIP IN PSYCHIC RESEARCH

From the "Psychic Fund," created by Mr. Thomas Welton Stanford, of Australia, the Trustees have established the Thomas Welton Stanford Fellowship for Research in Psychic Phenomena.

CANDIDACY FOR ADVANCED DEGREES

Candidates for advanced degrees must be registered in the University and must file a statement of their candidacy with the Registrar. The approval of a programme of study by the Department Faculty concerned and by the Committee on Graduate Study constitutes formal admission to candidacy. Only under exceptional circumstances will a programme of work be approved which is received later than the beginning of the semester preceding the one in which the degree is to be taken. It is advisable that such programme be filed as early as possible in the student's course. No advanced degree will be conferred except upon the recommendation of the Committee on Graduate study.

The Committee on Graduate Study interprets the requirement that statements of candidacy must be filed 'at the beginning of the academic year' etc., as meaning 'within the first six weeks of the academic year,' etc. And in no case will the degree of Master of Arts be conferred in less than two semesters after formal admission to candidacy. Statements once submitted must be kept on file and cannot be withdrawn even after substitutes have been filed and accepted.

MASTER OF ARTS

The degree of Master of Arts (A. M.) is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion in residence, of one year of work beyond the baccalaureate requirements of the department in which the degree is sought, and upon the presentation of an approved thesis, and the passing of such general or final examination as the major department may require. A longer period of residence will be

required of candidates who are inadequately prepared or who devote less than the normal amount of time to their graduate course. Work may be done in connection with the regular courses of instruction or, as research, independently of them. The programme of study must form a consistent plan of work pursued with some definite aim whether it lies wholly in a single department or field of study, or in more than one. At least two-thirds of a year's work must be devoted to advanced or graduate work in the major study or in intimately allied subjects.

Special regulations are:

1. A report upon the character of the work done shall be made by each instructor under whom a candidate is registered.
2. A candidate for the degree of Master of Arts must display ability to do independent work.
3. The Master's thesis, bearing the approval of the instructor under whose supervision it was prepared, must be submitted to the Committee on Graduate Study by the date on which instruction closes for the semester in which the degree is taken; upon acceptance, it shall be suitably bound and placed in the University Library.

The Committee on Graduate Study requires that the original, not a carbon copy, of the Master's thesis, written on paper of standard size and weight, be submitted and filed. The title-page should conform to that adopted by the committee.

ENGINEER

In the Department of Applied Science the professional degree of Engineer is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion, in residence, of one year of professional study beyond the baccalaureate requirements of the department in which the degree is sought, and upon the presentation of an approved thesis, showing ability to do independent work. Upon the recommendation of the Department, and in order to permit the carrying on of advanced work with equipment or under conditions not available at the University, the requirement of residence may in part be waived.

The special regulations stated above for the degree of Master of Arts apply also to the degree of Engineer.

JURIS DOCTOR

The degree of Juris Doctor (J. D.) is conferred on students who have previously received the academic degree of Bachelor of Arts, or

an equivalent degree elsewhere, upon the completion of the three years' professional law course. The first year of the professional law course may be taken by candidates for the A. B. degree.

DOCTOR OF MEDICINE

The degree of Doctor of Medicine (M. D.) is conferred upon students who complete the five years' course in Medicine (which includes the interne year), based upon the three years' pre-medical course as laid down by the University.

DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy (Ph. D.) is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion of at least three years of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, under the following conditions:

1. At least the last year of study must be spent in residence at this University.
2. At least one year prior to the date when the degree is sought, the candidate must show a reading knowledge of French and German in his special literature. The faculty of the department in which the major work is taken determines whether this requirement has been met.
3. The programme of study must include one major subject and one or two minors. The minor subject or subjects shall represent approximately one-third of the programme of study; except that such minor subjects may be waived upon the recommendation of the major subject department, if approved by the Committee on Graduate Study, when the breadth and extent of the candidate's training justify such a course,—in which case the candidate will be expected to show such breadth of training in his oral examination.
4. The candidate must present a thesis at least six weeks before the close of the semester in which the degree is sought, in form and content acceptable to his department and to the Committee on Graduate Study. He must guarantee the printing of the thesis within one year after the degree is conferred and the deposit of one hundred copies in the Library.
5. In addition to satisfying the requirements of major and minor departments, the candidate must submit to an oral test or examination by a special examining committee of the Faculty and in the presence

of such other members of the Faculty as care to attend. The special examining committee consists of (1) the professors of the major-subject department with the Chairman of the Committee on Graduate Study presiding, (2) the one or more professors in charge of the minor subject or subjects, (3) two members of the Committee on Graduate Study whose departments lie nearest that of the major professor, and (4) the Secretary of the Committee on Graduate Study, acting as its secretary. The Committee may at its discretion invite other members of the Faculty to participate in the oral examination.

ADVANCED DEGREES IN THE MEDICAL DEPARTMENT

The Divisions of the Medical Department are considered as equivalent to other departments of the University in respect to candidacy and requirements for the degrees of Master of Arts and Doctor of Philosophy, and all the foregoing regulations apply to these divisions and division faculties as to departments and department faculties, with the following modifications and limitations:

1. Candidates for these degrees must have received the degree of A. B. at Stanford, or an equivalent degree elsewhere, and must have completed all requirements for admission to the Department of Medicine, and such other requirements as each division faculty may prescribe.
2. Time spent in candidacy for the degree of Master of Arts or Doctor of Philosophy will not be counted toward the degree of Doctor of Medicine.
3. Candidates for these degrees in the divisions of Medicine, Surgery, and Obstetrics and Gynecology, must have received the degree of Doctor of Medicine.

THE HIGH SCHOOL TEACHER'S CERTIFICATE

High school certificates may be issued by County, and City and County Boards of Education under the provisions of Section 1519, subdivision 5 (a), Section 1775, subdivision 1 (a), and Section 1792 of the Political Code of California, to candidates who meet all the requirements under any one of the following groups:

GROUP 1: STANDARD GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.
2. One year of graduate study (which shall include one full-year course of advanced or graduate work in at least one subject in which

recommendation is sought) in an institution approved by the State Board of Education.

3. Fifteen units in Education, including courses in (a) School and Classroom Management, minimum one unit; (b) Secondary Education, minimum two units; (c) Practice Teaching (or eight months' teaching experience), minimum four units; (d) a Teachers' Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted by or listed under the work in Education, a maximum of three units for all such courses.

GROUP II: NORMAL-GRADUATE GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One half-year of graduate study (which shall include one half-year course of advanced or graduate work in at least one subject in which recommendation is sought) in an institution approved by the State Board of Education.

3. Graduation from an approved normal school.

4. Five units in Education, including (a) Secondary Education, minimum two units; (b) a Teachers' Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted by or listed under the work in Education, a maximum of three units for all such courses.

GROUP III: EXPERIENCED-TEACHERS' GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One half-year of graduate study (which shall include one half-year course of advanced or graduate work in at least one subject in which recommendation is sought) in an institution approved by the State Board of Education.

3. Twenty months' experience in schools of elementary or secondary grade.

GROUP IV: SPECIAL NORMAL-COURSE GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One half-year of graduate study (which shall include one half-year course of advanced or graduate work in at least one subject in which recommendation is sought) in an institution approved by the State Board of Education.

3. Five units in Education, including (a) Secondary Education, minimum two units; (b) a Teachers' Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted by or listed under the work in Education, a maximum of three units for all such courses.

4. One half-year (following the graduate study) in an approved normal school in which special courses are given for college students who are preparing for high school certification.

THE GRAMMAR SCHOOL TEACHER'S CERTIFICATE

Under Section 1775 of the Political Code of California, as amended March 1909, County Boards of Education are authorized to grant, without examination, grammar school certificates "to holders of diplomas of graduation of the four-year course of the University of California or Leland Stanford Junior University when said holder of such diploma shall have had six months' training in one of the State Normal Schools of this State or has had eight months' successful experience in teaching in the public schools of California after graduation."

Under Section 1543 of the Political Code of California, as amended March 1909, County Superintendents of Schools are authorized "to issue temporary elementary certificates valid for two years to graduates of the University of California and to graduates of the Leland Stanford Junior University"; but "no person shall be entitled to receive a temporary certificate more than once in the same county."

DEPARTMENTS OF INSTRUCTION

For a detailed list of courses offered in the different departments see Announcement of Courses for 1915-16, and also the Annual Announcements of the Law School and of the School of Medicine. These Announcements may be had on application to the Registrar, Stanford University, California.

The statements which follow are intended to set forth as concisely as possible the conditions of and opportunities for graduate study in the University.

ANATOMY

ARTHUR WILLIAM MEYER, Professor.

EDGAR DAVIDSON CONGDON, Assistant Professor.

ERNEST RISLING, Technical Assistant.

The equipment in books, periodicals, apparatus, and laboratories is adequate for the pursuit of any investigations in anatomy which does not require a collection of serial sections of human and mammalian embryos. A beginning has been made at a collection, but it is as yet only a beginning. Consequently only certain embryological investigations can, at present, be undertaken with advantage by students who are capable and willing to prepare the material themselves as part of their training. Provision has been made, however, for a trained technical assistant who is to prepare such a collection and relieve students and staff as much as possible and advisable of time-consuming routine technical procedures. Hence any earnest student desiring to investigate a problem in gross and microscopic anatomy or in physical anthropology or experimental biology need not be deterred by a fear of not being able to obtain the necessary equipment or material. Since the properly qualified graduate student in anatomy should occupy himself mainly with active investigation, the chief emphasis is placed upon this rather than upon the pursuit of advanced courses. For the latter the student is also referred to the announcement of courses in the Departments of Bacteriology, Entomology, Physiology and Histology, and Zoology.

All the important periodicals on human and comparative anatomy and experimental biology are in the University Library, and those on medicine in the Lane Medical Library, which, although located in San Francisco, is an integral part of the University Library.

Students desiring to undertake an investigation in Anatomy must have satisfactorily completed one year's work in histology and microscopic anatomy, at least one semester of embryology, and possess or obtain a knowledge of laboratory technique adequate for the investigation to be undertaken.

APPLIED MATHEMATICS

LEANDER MILLER HOSKINS, Professor.

HALCOTT CADWALADER MORENO, SIDNEY DEAN TOWNLEY, WILLIAM

ALBERT MANNING, Associate Professors.

ERNEST WILLIAM PONZER, Assistant Professor.

This Department offers advanced courses in several branches of Applied Mathematics and Practical Astronomy, listed in the Announcement of Courses under numbers 9, 12, and 14, which are open to graduate students having adequate preparation. These courses may, with the approval of the major department concerned in each case, form part of the work offered by candidates for advanced degrees in mathematics, physics, or engineering.

BACTERIOLOGY AND IMMUNITY

WILFRED HAMILTON MANWARING, Professor.

HARRY JOHNSON SEARS, Instructor.

MARCUS CLAUDE TERRY, HAROLD F. GRAY, Acting Instructors.

The Department of Bacteriology and Immunity offers advanced courses leading to the degree of Master of Arts, and covering the first year's work for the Ph. D. degree.

Students preparing for a professional career in bacteriology and immunity, are advised to take the regular course leading to the degree of Doctor of Medicine. With permission of the Medical Faculty, such students may substitute a year of advanced work in bacteriology and immunity for the required fifth hospital or clinical year.

The Laboratory of Bacteriology and Immunity is open for research to a limited number of physicians and advanced workers. No student

will be admitted to research who has not had a preliminary training in language, physics, chemistry, general biology, physiology, histology, medical bacteriology, and serology, equivalent to the required courses in the Medical department.

BOTANY

DOUGLAS HOUGHTON CAMPBELL, GEORGE JAMES PEIRCE, Professors.

LEROY ABRAMS, Associate Professor.

LEONAS LANCELOT BURLINGAME, Assistant Professor.

JAMES IRA WILLIAM MCMURPHY, Instructor.

This Department is now ready to receive students in four lines of Botanical study, namely, Morphology and Cytology, Physiology, Taxonomy and Plant Geography, and Mycology and Plant Pathology. The University Library contains the necessary references, and the laboratories are equipped with the necessary apparatus and appliances. The collections of Professor CAMPBELL in various parts of the world, and the richness of the local flora, offer special opportunity for work in the Archegoniatae. The Dudley Herbarium contains exceptional material in the flowering plants and the fungi of Western America. The extraordinary climatic conditions, permitting plants to grow throughout the year and allowing the successful cultivation of plants from many other parts of the world, furnish fresh material and the opportunity for physiological work under natural conditions.

There are two or three assistantships, and the Department is usually able to aid a few students in meeting their living expenses by special work in the Herbarium and otherwise.

CHEMISTRY

JOHN MAXSON STILLMAN, LIONEL REMOND LENOX, EDWARD CURTIS FRANKLIN, STEWART WOODFORD YOUNG, ROBERT ECKLES SWAIN, Professors.

JOHN PEARCE MITCHELL, WILLIAM HENRY SLOAN, Assistant Professors.
GEORGE SHAMBAUGH BOHART, ALICE RUTH BERGER, Instructors.

In facilities for graduate work leading to advanced degrees in several branches of chemical science, the department is fairly well equipped. The departmental library is in the Chemistry building and contains complete files of the principal journals on Chemistry—inorganic, organic, physical, physiological, analytical, as also the principal

dictionaries and encyclopedic works. Other chemical literature is located in the main university library and is a fair but not remarkable collection.

There are at present no class exercises organized exclusively for graduate students, but some of the advanced courses described in the Register are adapted to graduates though open to qualified undergraduates as well.

Candidates for the degree of Ph.D. will, in so far as instruction beyond the first graduate year is concerned, depend upon individual guidance from the professors.

There are at present no fellowships or scholarships in Chemistry, but several assistantships, which require from fifteen to thirty actual hours per week, receive from \$200 to \$250 per year. These positions, however, are not usually open to students who have not been in attendance for at least one year, that their adaptability for the particular service may be known.

Students contemplating presenting themselves for research work should understand that facilities do not exist for advantageously prosecuting all lines of Applied Chemistry, and should they have definite subjects of research in mind should inform themselves by correspondence with the Department as to the facilities for such work.

The following selection from titles of articles published from this laboratory will give a general idea of the range and character of subjects of investigation by members of this department at present on its roll, or by students working under their direction. It is of course fragmentary and covers a number of years, but will perhaps serve better than any other information to characterize opportunities existing here. Further or more specific information may be had by applying to the department.

On the Preparation of Cuprous Nitrate; Papers on Smelter Smoke; Concerning Skatosin; Volumetric Determination of the Nitro-group in Organic Compounds; Composition and Solubility of Hydrates of Sodium Thiosulphate; On the Combination of Anhydrous Ammonia and Aluminum Chloride; An Electrically Heated and Electrically Controlled Thermostat; Studies on Solution of Stannous Salts; On Iodostannous Acid; The Electrical Conductivity of Liquid Ammonia Solutions; Reactions in Liquid Ammonia; On Certain Factors Influencing the Precipitation of Calcium and Magnesium by Sodium Carbonate; Mechanical Stimulus to Crystallization; Potassium Ammono-plumbite; Electrical Conductivity of Liquid Sulphur Dioxide Solutions; Studies of Super-cooled Liquids; The Chronic Arsenical Poisoning of Herbivorous Animals; Liquid Methylamine as a Solvent and a Study of its

Chemical Reactivity; A Study of the Potable Waters of the San Francisco Peninsula; A Theory of the Mercury Ammonia Compounds; Some Notable Constituents of the Urine of the Coyote; An Ammonia System of Acids, Bases, and Salts; Optical Rotary Power of Liquid Ammonia, Methylamine, and Sulfur-dioxide Solutions.

The following titles will give an idea of subjects studied by members of the department and their students during the year 1914-15. The list includes as yet unpublished as well as published work.

The Action of Hydrolytic Agents on Allantoin; A Chemical Study of Certain Marine Mollusca; The Behavior of the Human Organism under Prolonged Fasting; The Nitrogen Metabolism of Various Bacteria; The Nitrogen Extractives of Plants, with Particular Reference to Allantoin; The Quantitative Estimation of Allantoin; The Glycogen Content of Molluscan Tissue and the Factors which Alter It; Attempts to Prepare an Ammonobasic Magnesium Bromide from Grignard's Reagent; Potassium Aquothallite; A Study of the Solvent Powers of the Primary, Secondary, and Tertiary Alkylamines; Potassium Ammonoargentate; Ammonobasic Iodides of Aluminium; Metallic Salts of Organic Acid Amides; Potassium Ammonobariate, -strontiate, -calcate, -sodiate, and lithiate; Rubidium Ammonosodiate and -potassiate; The Action of Potassium Amide on Certain Salts of Cadmium, Nickel, and Chromium; Studies on Complex Metallic Cyanides; Liquid Hydrogen Chloride and Liquid Hydrogen Sulfide as Solvents; The Action of Ammonia and Potassium Amide on Ferrous Bromide; The Effect of Smelter Smoke on Vegetation; Reversible Dispersion of Sulphides; Passivity of Iron; Synthesis of the Sulphides of Iron and Copper; Physical Chemistry of Ore Deposition; Migration of Colloid Particles; Sulphur Recovery from Smelter Fumes; Regeneration of Cyanides from Copper Cyanide Solutions.

CIVIL ENGINEERING

CHARLES DAVID MARX, CHARLES BENJAMIN WING, LEANDER MILLER
HOSKINS, JOHN CHARLES LOUNSBURY FISH, Professors.

JOHN HARRISON FOSS, Assistant Professor.

CHARLES MOSER, Instructor.

The Department of Civil Engineering recommends for the professional degree of Engineer, graduates of this University and others who have had an equivalent training elsewhere, on the satisfactory completion of one year of professional study beyond the baccalaureate

requirements of the Department and on the presentation of an approved thesis showing ability to do independent work. In the past, graduates from other institutions have not been advised to come to Stanford for graduate work. In the near future the Department hopes to be able to offer inducements to others than its own graduates; but all those intending to take up work leading to the degree of Engineer are advised to put themselves in direct touch with some member of the Department.

ECONOMICS

AND POLITICAL SCIENCE

MURRAY SHIPLEY WILDMAN, ALBERT CONSER WHITAKER, Professors.

WILLARD EUGENE HOTCHKISS, Acting Professor.

DONALD FREDERICK GRASS, STEPHEN IVAN MILLER, JR., VICTOR J. WEST,

FREDERIC BENJAMIN GARVER, Assistant Professors.

PAUL WANDER, JACOB ANTON DE HAAS, Instructors.

The University Library furnishes adequate material for the first year of graduate study in all the chief fields of study in economics and social science. The Hopkins railway library affords invaluable material for graduate study in the railway problem and in related fields. Students in economics will also find much material in the collections on the Far East and on the early history of California. Advanced study in the labor problem and problems of social and political organization is facilitated by accessibility to San Francisco. The Department gives one or more student assistantships of the total value of \$550.

EDUCATION

ELLWOOD PATTERSON CUBBERLEY, Professor.

PERCY ERWIN DAVIDSON, RUFUS CLARENCE BENTLEY, LEWIS MADISON

TERMAN, Associate Professors.

JESSE BRUNDAGE SEARS, Assistant Professor.

The Department of Education is prepared to receive graduate students as candidates for the Master's Degree in any line of work covered by its advanced courses; to direct students during the second year of graduate study; and to receive properly prepared students as candidates for the doctorate in such lines as its library, equipment, and practical facilities warrant.

The library facilities for work in Education include almost all of

the important books issued on education during the past thirty years, and also very good collections of the more important earlier books. The University Library is also well provided with books, documents, magazines, reports and proceedings relating to the development of education during the nineteenth century in England and America; with sets of the important English, French, German, and American educational and psychological journals; and with works relating to school and child hygiene and child psychology. The annual appropriation for purchases is such that any reasonable amount of available material needed by the graduate student can be secured.

In addition to the general University Library, the Department of Education has a special library of some 7,000 bound and unbound books and documents. This special library contains very complete collections of American state and city school reports, a good collection of old college and normal school catalogues, and old school text-books, of much historical value. The collection of present-day school texts is representative, and is constantly growing. The facilities for advanced study in the history of education in America, in city and state school organization and administration, and in the development and present status of the elementary and secondary school curriculum, offered by this special library, are especially good. The large city school systems in the vicinity of the University can be made available for certain kinds of advanced studies.

In addition to the regular courses offered, the members of the instructing staff stand ready to supervise original work in the following fields: Professor CUBBERLEY, history and organization of American education, and problems in state and city school administration; Professor DAVIDSON, problems in elementary school instruction and theory; Professor BENTLEY, problems in the organization and administration of American secondary schools; Professor TERMAN, problems in mental development, and in child and school hygiene; Professor SEARS, problems in rural school organization and administration.

The C. Annette Buckel Foundation has made possible a research fellowship, of the annual value of \$1,000, for the psychological and pedagogical study of backward children. A clinical laboratory has been provided, well equipped with apparatus and material for the study of exceptional children. The resources of the Foundation will for some time be devoted mainly to researches in mental examination methods.

ELECTRICAL ENGINEERING

HARRIS JOSEPH RYAN, Professor.

JAMES CAMERON CLARK, Assistant Professor.

AXEL NIELSON, Instructor.

The Department of Electrical Engineering receives students for a graduate or fifth year of work leading to the professional degree of Engineer in Electrical Engineering under the following conditions:

Candidates must be graduates of technical schools or colleges of recognized standing and must have pursued such courses of study in the elements of electrical engineering as will enable them to effectively undertake advanced electrical work. The Department will in all cases reserve the right to judge as to the sufficiency of the preparation in candidates desiring to undertake such advanced work.

The lines of work offered include the general subjects of Advanced Electrical Theory, Design of Machinery and Equipment, High Voltage Transmission, Electric Railways, and Transmission of Intelligence. In addition, the candidates will be required to pursue special individual studies and to prepare a thesis involving the study of some specific problem along personal and independent lines.

The Department laboratories are well equipped with illustrative types of commercial apparatus by the use of which a wide variety of problems in design and operation may be studied. One laboratory is equipped for high voltage work, including the investigation of line losses, corona formation and phenomena, testing of oils, insulator studies, etc.

The laboratory equipment includes a standards laboratory in which all apparatus used in investigation and study may be compared and calibrated in terms of the accepted international standards.

ENGLISH

WILLIAM HERBERT CARRUTH, RAYMOND MACDONALD ALDEN, ———, Professors.

LEE EMERSON BASSETT, Associate Professor.

SAMUEL SWAYZE SEWARD, JR., HOWARD JUDSON HALL, HENRY DAVID GRAY, WILLIAM DINSMORE BRIGGS, EVERETT WALLACE SMITH, Assistant Professors.

THERESA PEET RUSSELL, EDITH RONALD MIRRIELES, FRANK ERNEST HILL, ELIZABETH LEE BUCKINGHAM, ARTHUR GARFIELD KENNEDY, Instructors.

The Department of English is prepared to accept candidates for the Master's degree in Literature and Philology. The announcements will show the courses in which candidates may work, which are satisfactorily supported by the equipment of the library. It possesses many important sets such as *Palaestra*, *Materialien zur Geschichte des älteren Englischen Dramas*, the Tudor Facsimile Texts, the Malone Society reprints, the publications and transactions of the Old and New Shakespeare Societies and of the Spencer Society, the Rolls Series, Notes and Queries, and the like. The chief critical and technical journals are taken, though not all the sets are complete. The library has just been enriched by the acquisition of the private library of the late Professor Ewald Flügel, one of the best collections in America for the late Middle English period and Chaucer in particular.

The Department admits candidates for the degree of Doctor of Philosophy, although the University library still places some limitations upon the particular fields in which research may properly be conducted. The Department will be glad to confer with candidates desiring to come to Stanford for such work and will attempt to extend the library equipment in all possible cases. Conditions of the candidacy are a reading knowledge of German, French, and Latin, at least three years of systematic graduate study, and a satisfactory dissertation.

ENTOMOLOGY AND BIONOMICS

VERNON LYMAN KELLOGG, Professor.

MARY ISABEL MCCrackEN, RENNIE WILBUR DOANE, Assistant Professors.

DAVID STARR JORDAN, Lecturer.

Candidates for advanced degrees may take their major subject in Entomology or in Bionomics.

In Entomology the work may be systematic, economic, anatomical, developmental, or in experimental physiology. In Bionomics the work will be in experimental evolution.

The entomological laboratories and library are very well equipped. Excellent facilities are provided for histologic and photographic work. Complete sets of most of the more important entomological journals are in the library, and the collection of reprints of papers in insect morphology and insect evolution is a large one.

The entomological collections contain authoritatively determined specimens, accessible for comparison, in all of the insect orders, and

include many sets of specimens illustrating the development and habits of insects. There is included, also, the most important existing collection of North American Mallophaga, comprising the types of four-fifths of all the species so far described from North America and the Pacific Islands, an unusually large collection of Coccidae (scale insects), and valuable series of specimens from the Galapagos Islands and the Philippine Islands.

The department has two student assistantships which customarily are given to candidates for advanced degrees.

GEOLOGY AND MINING

JOHN CASPER BRANNER, JAMES PERRIN SMITH, Professors.

AUSTIN FLINT ROGERS, DAVID MORRILL FOLSOM, GALEN HOWELL CLEVENGER, CYRUS FISHER TOLMAN, JR., Associate Professors.

VALENTINE RICHARD GARFIAS, Acting Assistant Professor.

Advanced work is offered in structural and areal geology; in stratigraphic geology and paleontology; in crystallography, mineralogy, and petrography; in economic geology; in mining; and in metallurgy.

The field work is done wherever the nature of the problems may require, under the supervision of the professors having charge of these various branches.

The structural features of certain parts of California are readily accessible and especially interesting, but work of this kind may be taken in almost any part of the country.

In stratigraphy the whole of the west coast Mesozoic and Tertiary is accessible and affords unusual advantages for research. The paleontological collections are especially good in recent Tertiary, Cretaceous, Jurassic, and Triassic materials. The Arnold collection of west coast Tertiary and recent material and the Law, Streator, and Hemphill collections of shells are open to students, in addition to the general collections in paleontology.

In crystallography graduate work centers around an advanced course (9c) concerned with the study of the solid state. Goniometers and polarizing microscopes with optical accessories are available.

In mineralogy opportunities are especially favorable for work in chemical mineralogy. Much material for investigation is available and a small private chemical laboratory may be used by advanced students.

In petrography large collections of metamorphic and eruptive rocks

of the state are available, and abundant opportunities are offered for both field and laboratory work. The petrographic laboratory is well equipped for advanced work.

In economic geology the opportunities for studying the gold, silver, copper, and petroleum deposits are especially good, but they are not limited to these subjects.

Complete laboratory equipment has been installed for the study of opaque minerals and ores by means of the reflecting microscope. Extensive collections of ore and gangue minerals, and fresh and altered country rock from important mining districts are available for study.

Work in mining and metallurgy can be done wherever the problems of especial interest are to be found. The mines and metallurgical establishments of California, Nevada, Utah, Arizona, and Alaska are all accessible.

In the metallurgy laboratory equipment is available for the original investigation of problems in hydro- and pyro-metallurgy and in metallography.

The Department Library is full, and it receives the current publications from all parts of the world. In metallurgical and mining work the library is supplemented by the libraries of the departments of chemistry and engineering.

GERMANIC LANGUAGES

GEORGE HEMPL, JAMES OWEN GRIFFIN, Professors.

KARL GUSTAV RENDTORFF, WILLIAM ALPHA COOPER, Associate Professors.

BRUNO BOEZINGER, Assistant Professor.

CHARLOTTE A. KNOCH, Instructor.

The opportunities for graduate work in Germanics are good within certain limits. Candidates for the Master's degree find abundant work and facilities. Candidates for the Doctor's degree are advised to spend a part of the time at their disposal at some other university. No regular class-room courses are offered for graduate students exclusively, but various courses in both literature and philology are intended specifically for graduates and advanced undergraduates. Moreover, special courses of study designed for individual mature students and regularly superintended by the various members of the staff have become an important part of the work of the department.

The Library facilities are excellent in certain lines, and the collection is being rapidly strengthened in all directions. The private library of the late Professor Hildebrand furnishes valuable material

particularly in the older literature and in lexicography. In modern literature the Library offers good opportunities for advanced work, the Goethe collection being especially satisfactory. The files and the current numbers of most of the important journals are at hand.

GREEK

AUGUSTUS TABER MURRAY, Professor.

ERNEST WHITNEY MARTIN, Associate Professor.

The Department of Greek offers courses for graduate students, who are looking forward to the degrees of A. M. and Ph. D. Candidates for the degree of A. M., who have had a full undergraduate course in Greek, may ordinarily receive the degree in one year. Those who are obliged to devote much time to pedagogical work will usually require at least three semesters.

Candidates for the degree of Ph. D. can pursue their work to advantage in this University, but as a rule the Department recommends that one year be spent at some Eastern institution.

The University Library is well equipped for work, especially in the fields of the Epic, the Drama, and Historiography. Complete sets of the leading philological journals are in the Library, and sets which are incomplete are being completed as rapidly as possible.

HISTORY

EPHRAIM DOUGLASS ADAMS, ARLEY BARTLOW SHOW, †EDWARD BENJAMIN KREHBIEL, PAYSON JACKSON TREAT, Professors.

HENRY LEWIN CANNON, Associate Professor.

EDGAR EUGENE ROBINSON, ‡PERCY ALVIN MARTIN, Assistant Professors.

YAMATO ICHIHASHI, Instructor.

EUGENE ELLIS VANN, Acting Instructor.

DAVID STARR JORDAN, RALPH HASWELL LUTZ, Lecturers.

For the degree of Master of Arts, the University Library contains adequate material in all of the customary lines of Historical Study. This is true also for the first year of study looking toward the Ph. D. degree, but beyond that year the Department does not advise its graduate students to continue at Stanford, save in certain special fields in

†Absent on leave, 1915-16.

‡Absent on leave, first semester, 1915-16.

which the Library is unusually well equipped. These are (1) English-American relations of the 19th Century, in which topic Stanford possesses nearly all the printed documentary material anywhere available. (2) The Far East, particularly the history of Australasia, in which Stanford has the leading collection among American universities. (3) The History of California since the American occupation. (4) The French revolution, especially in relation to political pamphleteering of the earliest years of the revolution. (5) English History from 1200 to 1650. An effort is now being made to strengthen the material in South American history, but as yet this is insufficient to permit of advanced research work, save in the history of Brazil, in which field an extensive collection of Brazilianana recently donated to the University by President BRANNER is available to graduate students.

The Department has five student assistantships at \$300 each, which are customarily given to candidates for advanced degrees.

LATIN

HENRY RUSHTON FAIRCLOUGH, Professor.

JEFFERSON ELMORE, BENJAMIN OLIVER FOSTER, Associate Professors.

The Department of Latin offers courses for graduate students who are looking forward to the degrees of A. M. and Ph. D. These courses are open to graduates in Latin and are most profitable to those who have some knowledge of Greek. The ability to read French and German is also very desirable, and, in the case of candidates for the degree of Ph. D., necessary. The aim of the course is to give the student a thorough grasp and detailed knowledge of particular authors, and of certain periods and fields of literary activity, as well as a training in literary criticism, and an acquaintance with the methods of original research.

Candidates for the A. M. degree, who have had a full undergraduate course in Latin, may ordinarily receive the degree in one year.

Candidates for the Ph. D. degree, which involves three years' work as a minimum, may pursue their work to advantage in this University, but as a rule the Department recommends that at least one year be spent in an Eastern institution.

The University Library is equipped with sets of the leading philological journals and is well supplied with the ordinary literature. It embraces the Minton Warren collection of books and papers on Terence. It is also well furnished with material for the study of Palaeography

and Epigraphy, including Fabretti's *Corpus Inscriptionum Italicarum*. In Etruscan and the other Italic dialects the Department enjoys the co-operation of Professor GEORGE HEMPL of the Department of Germanic Languages.

LAW

FREDERIC CAMPBELL WOODWARD, ARTHUR MARTIN CATHCART, CHARLES ANDREWS HUSTON, JOSEPH WALTER BINGHAM, CLARKE BUTLER WHITTIER, Professors.

MARION RICE KIRKWOOD, Assistant Professor.

SAMUEL WATSON CHARLES, Lecturer.

The purpose of the Law School is to provide a thorough legal education for students who are fitted by their maturity and their previous academic training to pursue professional study under university methods of instruction. The curriculum covers three academic years and constitutes an adequate preparation for the practice of law in any English-speaking jurisdiction. A comprehensive group of courses in Public Law, of value not only to the law student but to the student who contemplates entering the diplomatic, consular, or other government service, is a feature of the curriculum. Courses in various branches of commercial law, of value to advanced students in Economics, are also offered.

The Law Library contains over 20,000 volumes, including complete sets of the English, Irish, Scotch, and Canadian reports, the reports of all the Federal courts, a practically complete set of the reports of the American States and of the Canadian Provinces, the National Reporter system, the standard collections of cases (including the American Decisions, American Reports, American State Reports, Lawyers' Reports Annotated, and American and English Railway Cases), a valuable collection of statutes, text-books, encyclopedias, digests, and other books of reference, and sets of the leading American, British, and Continental legal periodicals.

Students who have received the degree of Bachelor of Arts, or its equivalent, from this University, or from some other institution of recognized collegiate rank, and who have satisfactorily completed courses in law aggregating 75 units (the equivalent of three full years of professional study of law), and who have otherwise satisfied the requirements of the University and of the Law School, will be granted the degree of Juris Doctor (J. D.). It is insisted, however, that not more than 25 units of credit in law received by a student while an

undergraduate in this or another university shall be counted toward the degree of Juris Doctor; except that a student who has, while an undergraduate, accumulated more than 25 units of credit in law may count toward the degree of Juris Doctor such of the additional units as have not been counted toward his A. B. degree.

MATHEMATICS

ROBERT EDGAR ALLARDICE, RUFUS LOT GREEN, HANS FREDERICK Blichfeldt, Professors.

The Department of Mathematics offers courses for graduate students who are looking forward to the degrees of A. M. and Ph. D. Candidates for the degree of A. M., who have already taken the degree of A. B., with Mathematics as a major study, may ordinarily receive the degree in one year.

The Department has now a fairly good library, with complete sets of all the more important mathematical serials.

MECHANICAL ENGINEERING

WILLIAM FREDERICK DURAND, GUIDO HUGO MARX, WILLIAM RANKINE ECKART, Professors.

EVERETT PARKER LESLEY, Associate Professor.

CHARLES NORMAN CROSS, LAWRENCE EDMINSTER CUTTER, Assistant Professors.

EDWARD JOHN STANLEY, JAMES BENNETT LIGGETT, THERON JAMES PALMATEER, ROBERT HENRY HARCOURT, HORATIO WARD STEBBINS, Instructors.

The Department of Mechanical Engineering enrolls students in the regular fifth and last year of a five-year course leading to the degree of Engineer. Such students may be either

(a) Graduates of the Department with a degree of A. B. in the course covered by the first four years of the five-year curriculum.

(b) Graduates of other institutions who have covered a substantial equivalent of such undergraduate or first-degree curriculum.

The regular courses offered in the fifth, or graduate, year are as follows: Thermodynamics, Advanced Design, Experimental Engineering; Business and Contract Law; Shop Administration; Power Plants; Pumping Machinery; Seminary; Thesis.

In case the student has satisfactorily covered any portion of this ground in his earlier work, substitutions will be accepted covering work in any of the Engineering Departments (Civil, Electrical, Mining), or additional elective work will be provided within the Department either in research laboratory work or in such other lines as may best suit the plans and purposes of the student.

The material equipment of the Department includes in the Library the leading technical periodicals and proceedings, European and American, and a well chosen selection of the published books which have appeared during the past fifteen years.

In the Mechanical Laboratory, the Department is supplied with a good selection of prime movers of various sorts, steam and gas, reciprocating and turbine, air compressor, refrigerating unit, high pressure boiler with forced and natural draft, as well as a large variety of measuring instruments and special appliances for research work in the more important fields of mechanical engineering work.

The services of the University Mechanician Shop, which is managed as an adjunct to the Department of Mechanical Engineering, are available through department appropriation for the construction of special instruments and apparatus.

A new laboratory has been equipped with representative hydraulic machinery and appliances and with suitable provision for the measurement of the various factors entering into its economic performance. This equipment provides facilities for a wide range of research and experimental work in this field.

The undergraduate workshops are well supplied with tools and equipment suited to the purposes of undergraduate instruction, and which under suitable limitations might become available for research work in special directions relating to the problems of industrial production.

PATHOLOGY

WILLIAM OPHÜLS, Professor.

CHARLES HARVEY BAILEY, Instructor.

JEAN R. OLIVER, Assistant.

The Pathological Laboratory in San Francisco (Medical Building, n. e. corner of Sacramento and Webster streets) is open to advanced students. It is equipped for research work in pathological anatomy and in experimental pathology. A thorough preparation in Anatomy, Physiology, Bacteriology, and a satisfactory completion of courses 1, 2, and

3 of the Division of Pathology as outlined in the Annual Announcement, or their equivalent, is required for graduate work.

The Lane Medical Library directly across the street furnishes exceptional advantages for reference.

PHARMACOLOGY

ALBERT CORNELIUS CRAWFORD, Professor.

———, Assistant.

The Pharmacological Laboratory in San Francisco is open to advanced students in physiology and in chemistry, and every facility is given for doing graduate work. It is equipped for research work in both the physiological and chemical sides of pharmacology. Most of the important pharmacological literature is readily available. Credit toward advanced degrees in Physiology will be accepted for work done in Pharmacology.

PHILOSOPHY

HENRY WALDGRAVE STUART, Professor.

HAROLD CHAPMAN BROWN, Assistant Professor.

The Department of Philosophy will enroll students for one year of graduate work, leading to the degree of Master of Arts, but will not undertake to provide, in every case, sufficient work within the limits of a single academic year to qualify for the degree. No regular courses are offered primarily for graduate students; the work of candidates for the Master's degree will be directed in individual conference, but students coming from other institutions may attend with advantage the regular courses of the Department which cover the general field within which the work for the degree is to be done.

The Library contains at present upwards of twenty complete sets of leading philosophical journals, bulletins, and reports of proceedings (for most of which current subscriptions are carried), complete or collected editions of the works of the principal philosophers, and a representative selection from the standard and contemporary literature, historical, critical, and constructive, covering the different fields of philosophical study.

PHYSICS

FERNANDO SANFORD, Professor.

FREDERICK JOHN ROGERS, Associate Professor.

ELMER REGINALD DREW, JOSEPH GRANT BROWN, Assistant Professors.

PERLEY ASON ROSS, Instructor.

The Department of Physics has no separate equipment for graduate work and no division of its curriculum into graduate and undergraduate courses. On account of the major department system adopted by the University, students who take the A. B. degree in Physics have had more courses in the subject than graduate students entering from other universities. A number of courses required for graduation in the department are accordingly taken by graduates of other institutions or other departments.

In addition to the courses offered in the department, reading courses in Theoretical Physics are provided for as occasion demands. In this work the department has been greatly assisted by Professors BLICHFELDT, HOSKINS, and MORENO, of the Mathematics departments.

The Physical Laboratory is large enough for the present needs of the department, and contains a sufficient number of individual rooms fitted for research work to accommodate a larger number of graduate students than the department has ever had. The apparatus equipment is modern, and consists largely of high grade instruments; it is sufficient in quantity to meet the legitimate needs of undergraduate work and to provide for a few graduate students in certain rather restricted lines of investigation. It is more complete in Electricity than in other branches of Physics, but is also fairly good in optics. Among the recent acquisitions in this department of work are a 12-foot Littrow spectrograph with Rowland grating, made by Brashear, a Féry quartz spectrograph, by Hilger, and a photo-measuring micrometer, also by Hilger. The Department has no mechanician, but has a limited sum of money at its disposal with which it can pay for the construction of special apparatus by the University mechanician.

The library facilities of the department are relatively better than any of its other facilities for graduate work. The University subscribes for all the important physical journals in English, French, and German, and contains complete sets of the more important of these and of the transactions and proceedings of a number of learned societies. The more important treatises on physical subjects in English, French, and German, and the collected papers of a number of the most eminent physicists, are also in the Library.

There are no fellowships in Physics, but there are four laboratory assistantships paying \$500 a year each and involving ten or eleven hours a week of laboratory instruction throughout the year. These are given by preference to graduate students who are working for the Doctor's degree in Physics.

PHYSIOLOGY AND HISTOLOGY

OLIVER PEEBLES JENKINS, FRANK MACE MCFARLAND, Professors.

CLARA S. STOLTENBERG, Associate Professor.

JAMES ROLLIN SLONAKER, FRANK WALTER WEYMOUTH, Assistant Professors.

The library is exceptionally well equipped with complete sets of Journals in Physiological, Histological, Cytological, and Neurological lines. The laboratories are well equipped with apparatus, and means are at hand for provision for special equipment which may be required in the development of a special line of research.

The Department is associated with the Department of Zoology in maintaining the Marine Laboratory at Pacific Grove. The great richness of the fauna of the coast at this point offers a fine field for research in marine life.

Graduate work is offered in Physiology, Histology, Cytology, and Neurology leading to Master's and Doctor's degrees. The graduate work is included under the specific courses designated in the *Register* as Nos. 4a, 7a, 8, 10, 11, 12, 13, 14, 15. The details of the work of a graduate student will be planned for each individual, and will naturally depend on the aim sought by him and upon his previous training. Candidates for the higher degrees will be expected to include in their work attendance on the Journal Club and Seminary, the selection of certain of the courses given above, and the accomplishment of some research. When it is desired to select a minor subject the choice of such minor will be guided by the needs of the candidate. The work leading to these degrees is of such a nature as to require a reading knowledge of German and French for its accomplishment.

PSYCHOLOGY

FRANK ANGELL, LILLIEN JANE MARTIN, Professors.

JOHN EDGAR COOVER, Assistant Professor, and Research Fellow in Psychic Phenomena.

The Department is prepared to take candidates for the Master's and Doctor's degrees in experimental work such as is typified in most of the investigations in the American Journal of Psychology or in Wundt's *Philosophische Studien*.

The laboratory is made up of fifteen rooms connected by an admirable electric installation and especially well equipped with time-measuring apparatus—cronoscopes, forks, kymographs, pendulums, etc. It is only fairly provided with instruments for the investigation of tones and colors, and, at present, lacks the material for the study of animal psychology.

The current numbers of twenty magazines of direct or indirect psychological interest are to be found on the tables of the Department Library, and the bound volumes of the magazines are placed on the Library shelves.

ROMANIC LANGUAGES

OLIVER MARTIN JOHNSTON, Professor.

CLIFFORD GILMORE ALLEN, Associate Professor.

AURELIO MACEDONIO ESPINOSA, ROBERT EDOUARD PELLISSIER, STANLEY

ASTREDO SMITH, Assistant Professors.

LOUIS PETER DE VRIES, Instructor.

The Department of Romanic Languages offers advanced courses leading to the degrees of Master of Arts and Doctor of Philosophy. The Library contains adequate material for graduate courses in French and Spanish literature and philology. The Dante collection is also adequate for graduate work in this subject. In Old French philology and literature the facilities are unusually good, particularly in collections of early texts. The Library carries current subscriptions for the leading journals devoted to Romance literature and philology and contains complete sets of the *Romania*, *Zeitschrift für romanische Philologie*, *Zeitschrift für französische Sprache und Literatur*, *Romanische Forschungen*, *Revue hispanique*, *Revue d'histoire littéraire de la France*, *Studi Medievali*, *Modern Philology*, *Publications of the Modern Language Association of America*, *Giornale Storico della Letteratura Italiana*, *Revista de filología española*.

The Department has two teaching assistantships which are given to graduate students, preferably to candidates for the Doctor's degree. In general, some knowledge of Latin and German is a necessary preparation for the graduate courses offered.

ZOOLOGY

CHARLES HENRY GILBERT, HAROLD HEATH, GEORGE CLINTON PRICE,
Professors.

JOHN OTTERBEIN SNYDER, Associate Professor.

EDWIN CHAPIN STARKS, WALTER KENDRICK FISHER, Assistant Professors.

For the degree of Master of Arts, both material and literature are available in the morphology, embryology, and classification of the principal phyla of the Invertebrata, and in the anatomy and classification of the Vertebrate groups. For the degree of Doctor of Philosophy, the department is prepared to offer work especially in the anatomy and embryology of mollusks and worms, in the anatomy and classification of echinoderms, hemichordates, and coelenterates, and in the skeletal morphology of fishes and their classification. The proximity of exceptionally rich collecting grounds on the ocean shore, especially at Monterey Bay, where is located the Marine Biological Laboratory of the University, offers unusual facilities for obtaining material and for the investigation of living forms. The collections of the Department are extensive in littoral and bathyal forms of the northern and tropical Pacific. The Department library contains some thirty complete sets of the principal zoological periodicals.

GRADUATE STUDENTS

1914-15

Abel, Edson Cronk A. B., Stanford, 1913.	Law	Monrovia
Adams, Walter Crawford B. S., Michigan, 1914.	Medicine	Lodi
Ainslie, Charles Albert B. S., California, 1913.	Medicine	Danville
Allen, Clarence Emir, Jr. A. B., Yale, 1913.	Law	Salt Lake City, Utah
Ambrose, Arthur Warren A. B., Stanford, 1914.	Geology	Lockeford
Anderson, Laurel Edwin A. B., Stanford, 1914.	Law	Burlingame
Andresen, Christian A. A. B., Carleton, 1914.	Medicine	Clara City, Minn.
Andrus, Carlton Leverett A. B., Stanford, 1915.	Medicine	San Jose
Arnold, Clement HARRISSE A. B., Stanford, 1910.	Medicine	Palo Alto
Bacon, William Cyril A. B., North Dakota, 1913.	Law	Cando, N. D.
Bailey, Margery A. B., Stanford, 1914.	English	Palo Alto
Baker, William Elliott A. B., Stanford, 1914.	Education	San Jose
Ball, Hazel Myra A. B., Stanford, 1915.	English	San Jose
Barbat, Claire Mabel A. B., Stanford, 1914.	Medicine	San Francisco
Barker, Anna Ruth A. B., Stanford, 1914.	Spanish	Modesto
Barnard, Walter E. A. B., Stanford, 1913.	Education	Worcester, Mass.
Barry, George Long A. B., Stanford, 1914.	Medicine	San Jose

Beal, Carl H. A. B., Stanford, 1913.	Geology	Palo Alto
Bevier, George, Jr. A. B., Stanford, 1912.	Medicine	Spokane, Wn.
Bingham, Beatrice J. A. B., Stanford, 1914.	English	Los Angeles
Bird, Alice Irene A. B., Ohio Wesleyan, 1905.	Zoology	Monrovia
Black, Floyd Davidson A. B., Kansas, 1913.	Law	Palo Alto
Blase, Roland Roy A. B., Stanford, 1914.	Civil Engineering	No. St. Paul, Minn.
Bliss, Anna A. B., Stanford, 1914.	German	Earlville, Ill.
Bodley, Edith May A. B., Stanford, 1914.	English	Palo Alto
Bol, Cornelius B. S., Montana, 1914.	Physics	Meerkerk, Holland
Boyers, Luther Musson A. B., Stanford, 1912.	Medicine	San Francisco
Boyle, William Archdall B. S., California, 1914.	Medicine	San Rafael
Brekke, Mabel A. A. B., Stanford, 1913, A. M., 1914.	Greek	Los Altos
Brier, Edward Blake A. B., Occidental, 1913.	Civil Engineering	Los Angeles
Briggs, Alfred Poyneer B. S., Colorado, 1912.	Chemistry	Los Angeles
Brown, Claude Everett A. B., Stanford, 1914.	Medicine	San Francisco
Brown, Floyd Cromwell A. B., Stanford, 1913.	Civil Engineering	Selma
Brown, Kearn Babcock Ph. B., Alfred University, 1912.	Entomology	Brookfield, N. Y.
Brydolf, Vernon Mars A. B., Stanford, 1914.	Law	San Bernardino
Bullard, Helen Talbott A. B., Stanford, 1914.	History	Los Angeles
Burns, William Sherman A. B., Stanford, 1914.	Law	New York, N. Y.
Burrell, Florence Cotton A. B., Stanford, 1910.	Entomology	Palo Alto
Butcher, William P., Jr. A. B., Stanford, 1913, J. D., 1915.	Law	Santa Barbara

Campbell, Erroll Preston A. B., Stanford, 1914.	Civil Engineering	Modesto
Carr, Mildred Douglas A. B., Stanford, 1914.	Graphic Art	Alhambra
Carus, Evelyn Temperance A. B., Stanford, 1914.	History	Gridley
Case, Walter Mackay A. B., College of Pacific, 1914.	History	San Francisco
Casey, Elizabeth Ph. B., Chicago, 1906.	Spanish	Wilmette, Ill.
Cass, Donald A. B., Stanford, 1914.	Medicine	South Pasadena
Castle, Otis Henry A. B., Stanford, 1914.	Law	Pasadena
Caton, Candace Orene A. B., Stanford, 1914.	History	Concordia, Kas.
Chamberlain, Mary Bufink A. B., Indiana, 1898.	Education	Palo Alto
Chapman, Herbert Samuel A. B., Stanford, 1914.	Medicine	Clayton
Chapman, John Frye A. B., Stanford, 1909.	Medicine	Redlands
Chislett, William, Jr. A. B., Stanford, 1910, A. M., 1912.	Latin	Los Angeles
Clark, William Otterbein A. B., Stanford, 1906.	Geology	Palo Alto
Cline, George Willis A. B., Stanford, 1914.	Medicine	San Jose
Close, Carlos Cooper A. B., Stanford, 1914.	Law	Spokane, Wn.
Cooke, John Daniel A. B., Stanford, 1914.	Greek	Palo Alto
Cornwall, Edward Augustus A. B., Stanford, 1914.	Entomology	Redlands
Cottrell, Joseph Paul, Jr. A. B., Stanford, 1914.	Law	Colton
Cowan, Floyd Wellesley A. B., Stanford, 1914.	Law	Hemet
Cowen, Charles Edward B. S., Dartmouth, 1910.	Education	Hughson
Cox, Anna Shipley A. B., Stanford, 1909, A. M., 1913.	Latin	San Jose
Cox, H. Ben A. B., Stanford, 1915.	Law	San Jose

Cox, Joel Bean A. B., Stanford, 1914.	Civil Engineering	Honolulu, T. H.
Cram, Clara A. B., Stanford, 1914.	English	East Highlands
Crandall, Harriet Ruth A. B., Stanford, 1914.	Graphic Art	Palo Alto
Crandall, Hector A. B., Stanford, 1913.	Geology	Palo Alto
Crawford, James Porter A. B., Stanford, 1912.	Medicine	San Francisco
Crown, Frank A. C. A. B., Lawrence, 1905; M. D., Marquette, 1906.	History	San Jose
Cumberland, Esther Clarice B. S., Occidental, 1910.	Medicine	Lordsburg
Curry, Walter Clyde A. B., Woffard College, 1909; A. M., Stanford, 1913.	English	Gray-Court, S. C.
Daniells, Nina Carrie A. B., Stanford, 1915.	History	Lindsay
Davis, Alexander W. A. B., Stanford, 1914.	Law	Pomona
Davis, Charles Skinner A. B., Stanford, 1914.	Law	Honolulu, T. H.
Day, Carl Edwin A. B., Stanford, 1914.	Law	Watsonville
Dodd, John McKee A. B., Stanford, 1914.	Chemistry	San Francisco
Donovan, Elizabeth A. B., College of Pacific, 1914.	French	San Jose
Donovan, Mary Monica A. B., College of Pacific, 1913, A. B., Stanford, 1914.	Medicine	San Jose
Downing, Samuel Robert A. B., Stanford, 1907.	Medicine	San Francisco
Doxsec, Wilbur Harvey A. B., Stanford, 1913.	Education	Redwood City
Draper, Roscoe Leroy A. B., Stanford, 1913.	Medicine	Arroyo Grande
Drinkwater, Harold Paul A. B., Colorado, 1913.	Law	Denver, Colo.
Dugan, Ethel Ray A. B., Smith, 1910.	History	Hazleton, Pa.
Dunlop, Florence Edetha A. B., Stanford, 1913.	Medicine	San Francisco
Dunn, Teresa Pauline A. B., Stanford, 1914.	History	Monrovia

Durgin, Eva Lillian A. B., Stanford, 1914.	Medicine	Cupertino
Durgin, Rubie Mae A. B., Stanford, 1914.	Medicine	Cupertino
Dwight, Ben Hunter A. B., Columbia, 1912.	Law	Durant, Okla.
Earle, Minnie Mae A. B., Upper Iowa University, 1910.	English	Elgin, Iowa
Ehrenclou, Alfred Hjalmar A. B., Stanford, 1914.	Medicine	San Francisco
Eldred, Fred Huestis B. S., Occidental, 1914.	Chemistry	Los Angeles
Else, Howard McKee A. B., Stanford, 1914.	Chemistry	Palo Alto
Emerson, James Gordon B. S., Iowa State College, 1912; J. D., Stanford, 1915.	Law	Stanford University
Erickson, Frank Morton A. B., Wabash, 1892, A. M., Chicago, 1895.	Education	Los Altos
Finney, Florella Kelso A. B., Stanford, 1914.	Physics	Modesto
Flanders, Edward Aiken A. B., Stanford, 1908.	Civil Engineering	San Francisco
Fletcher, Harold Augustus B. S., California, 1912.	Medicine	San Francisco
Florence, Laura M. A., Aberdeen, 1907, B. Sc., 1909.	Entomology	Aberdeen, Scotland
Flügel, Felix A. B., Stanford, 1914.	Economics	Palo Alto
Fore, Harry Adolph A. B., Stanford, 1913.	Physics	San Jose
Forster, Joseph Harold A. B., North Dakota, 1914.	Law	Hillsboro, N. D.
Foster, Marjorie Greene A. B., Stanford, 1914.	Chemistry	San Rafael
Fuller, Justin Keyser B. S., California, 1912.	Medicine	San Francisco
Fulmer, L. Roy A. B., College of Pacific, 1900; B. S. T., Boston University, 1904.	Education	Los Gatos
Gage, Edmund Vernon A. B., Harvard, 1899; A. M., Pennsylvania State College, 1908.	French	Palo Alto
Gard, Frank Jacob A. B., Stanford, 1914.	Chemistry	Glendora

Gearhart, William Edgar	Law	Batavia, Ia.
A. B., Iowa, 1913, J. D., Stanford, 1915.		
Gerwin, Vera Marian	History	Redwood City
A. B., Stanford, 1915.		
Gilbert, Carl Hughes	Law	Palo Alto
A. B., Stanford, 1913.		
Gilbert, Ramon Augustus	Medicine	San Francisco
B. S., California, 1913.		
Girdner, Margaret Virinda	History	Sacramento
A. B., Stanford, 1915.		
von Glahn, Anne Luella	Latin	Ripon
A. B., College of Pacific, 1914.		
Goddard, Winfred Rawdon	Chemistry	Palo Alto
A. B., Stanford, 1914.		
Golden, Abram Lee	Law	Billings, Mont.
A. B., Colorado College, 1913.		
Goplerud, Clifford Peter	Civil Engineering	Osage, Ia.
A. B., Stanford, 1915.		
Green, Boynton Morris	Mechanical Engineering	Redlands
A. B., Stanford, 1914.		
Griffin, Roscoe Wadsworth	Law	Vallejo
A. B., Stanford, 1913, J. D., 1915.		
de Haas, Jacob Anton	Economics	Stanford University
A. B., Stanford, 1910; A. M., Harvard, 1911.		
Ham, William Thomas	English	San Jose
A. B., College of Pacific, 1913.		
Hammond, Philo Fay	Physics	Palo Alto
A. B., Washington, 1907.		
Hanna, John Alford	History	Auburn, Neb.
A. B., Dartmouth, 1914.		
Harbour, Nina	History	Orange
A. B., Stanford, 1915.		
Hartwig, Charles Henry	Physiology	Los Angeles
A. B., James Milliken University, 1909.		
Hashiba, George K.	Medicine	San Francisco
A. B., Stanford, 1915.		
Haub, Alma Anita	Physics	Santa Rosa
A. B., Stanford, 1914.		
Hawkins, Effie Izah	Education	Palo Alto
A. B., Stanford, 1914.		
Heald, Elmer Wilson	Law	Palo Alto
A. B., Stanford, 1914.		
Heider, Otto W.	Law	Sheridan, Ore.
A. B., Oregon, 1914.		

‡Higley, Wynter Blaine A. B., Stanford, 1909.	Physics	Palo Alto
Hill, Charles Albert A. B., Stanford, 1913.	Law	Moline, Kas.
Hill, Frank Ernest A. B., Stanford, 1911, A. M., 1914.	English	Palo Alto
Hobson, Celesta A. B., Stanford, 1915.	Graphic Art,	San Jose
Hogg, Elton Marion A. B., College of Pacific, 1912; A. M., Stanford, 1913.	Chemistry	Saratoga
Holbrook, Lettie DeVoe A. B., Stanford, 1913.	History	Palo Alto
Holt, Inezetta A. B., Stanford, 1914.	History	Redding
Hooker, Ora Whitley A. B., Stanford, 1915.	Education	Los Angeles
Horton, Helen Clifford A. B., Stanford, 1914, A. M., 1915.	German	Pasadena
Howard, Grenville Gates A. B., Stanford, 1915.	Geology	Stanford University
Howe, Mollie Margaret A. B., Stanford, 1914.	Latin	Chicago, Ill.
Howes, John Gaylord A. B., Stanford, 1914.	History	Palo Alto
Humphrey, Cora Viola A. B., Stanford, 1914.	History	Cupertino
Inslee, Edward Hubert A. B., Stanford, 1915.	Physics	Palo Alto
Irons, Oliver Eller A. B., College of Pacific, 1913.	Education	Los Gatos
Ives, Agnes Sherwin A. B., Minnesota, 1905.	Latin	Palo Alto
Jacob, Lina Stella A. B., Stanford, 1914.	German	Palo Alto
Jameson, Bernice A. B., Stanford, 1915.	Medicine	Corona
Jameson, Irene Evelyn A. B., Stanford, 1914.	History	San Diego
Jenkins, Leonard R. A. B., Stanford, 1913.	Medicine	Ogden, Utah
*Jenkins, Olaff Pitt A. B., Stanford, 1913.	Geology	Nashville, Tenn.

‡Deceased, January 1, 1915.

*In absentia.

Job, Martha Judith A. B., Stanford, 1915.	English	Mountain View
Johnson, Frances Mary A. B., Stanford, 1914.	English	San Jose
Johnston, Faber Laine A. B., Stanford, 1914.	Law	San Jose
Johnston, Petra Beatrice A. B., Stanford, 1914.	German	Redwood City
Johnston, Walter Foster A. B., Stanford, 1914.	Economics	Everett, Wn.
Jollyman, Alice A. B., Stanford, 1905.	History	Cupertino
Jones, Robert Alton A. B., Stanford, 1908.	Medicine	San Francisco
Kay, Willard E., Jr. A. B., Stanford, 1912.	Medicine	Ogden, Utah
Keirns, May Elizabeth A. B., Parsons College, 1906.	Latin	Palo Alto
Kellar, Herbert Anthony A. B., Chicago, 1909.	History	Palo Alto
Kennedy, Clarence H. A. B., Indiana, 1902, A. M., 1903; A. M., Stanford, 1915.	Entomology	Rockport, Ind.
Kerwin, Margaret Hope A. B., College of Pacific, 1914.	Law	Salt Lake City, Utah
Kieffaber, Geo. Washington A. B., Mt. Morris, 1911.	Education	Lordsburg
Kimball, Elena Sophia A. B., Stanford, 1915.	Education	Eureka
King, Marion Reginald A. B., Stanford, 1914.	Medicine	Porterville
Kitagawa, Kay Jiro A. B., Stanford, 1914.	Anatomy	Kioto, Japan
Knollin, Ernesto Ray A. B., Stanford, 1914.	Education	Stanford University
Knollin, Herbert Edward A. B., Stanford, 1911.	Education	Stanford University
Kuhn, Orta Edward A. B., Baker, 1906.	Medicine	San Francisco
Kusunoki, Miyozo A. B., Stanford, 1914.	History	Palo Alto
Landreth, Harold Brooks A. B., Occidental, 1912.	Law	Pasadena
Lasky, Bernard H. A. B., Stanford, 1913.	Mining	San Francisco

Lee, Gladys Margaret A. B., Stanford, 1914.	Spanish	Los Angeles
Levy, Karl Riffle A. B., Stanford, 1913.	Law	Los Angeles
Levy, Paul Mark A. B., Stanford, 1913.	Chemistry	Reno, Nev.
Libis, Ethel Melrose A. B., Stanford, 1913.	French	Hollywood
Linden, Charlotte Smith B. S., California, 1913.	Medicine	San Francisco
Locke, Ruth Wood A. B., Southern California, 1912.	English	Los Angeles
Logan, William Anthony A. B., Stanford, 1914.	Law	Mayfield
Lorentzen, Kay Gustave A. B., Beloit, 1905.	Medicine	San Francisco
Lotz, Cyril Clyde A. B., Stanford, 1914.	Law	San Jose
Loud, Harold Lester A. B., Southern California, 1913.	Law	St. Louis, Mo.
Low, Apau Paul A. B., Stanford, 1914.	Civil Engineering	Honolulu, T. H.
Lundkvist, Emil Alexander Gr., Bethel Seminary, Stockholm, 1906.	English	Palo Alto
Lyman, Timothy A. B., Dartmouth, 1903.	Medicine	Eau Claire, Wis.
McAndrew, Alexander A. B., Yale, 1913.	Civil Engineering	Nordhoff
McCarthy, Francis Justin A. B., St. Mary's, 1911.	Medicine	San Francisco
McGonigle, Rose Vibiana A. B., Stanford, 1914.	History	Los Angeles
McLaughlin, Roy Parmelee A. B., Stanford, 1902.	Geology	Redwood
Macrum, Natalie A. B., Stanford, 1914.	Latin	Los Altos
Mader, Constance Marie A. B., Stanford, 1914.	German	Santa Rosa
Maple, Ray Cowser A. B., Stanford, 1915.	Economics	Glasford, Ill.
Marks, Maude Helen A. B., Mt. Holyoke, 1910.	German	Palo Alto
Marx, Roland Grotecloss A. B., Stanford, 1911.	Electrical Engineering	Palo Alto

Maurer, Loche Morton	Economics	Los Angeles
A. B., Stanford, 1914.		
Meginity, Mary Alma	English	Oakdale
A. B., College of Pacific, 1913.		
Melom, Carl Marcus	French	Mayfield
B. L., Minnesota, 1901, A. M., 1902.		
Miano, John Norton	Education	Palo Alto
A. B., Stanford, 1909.		
Millett, George Wilber	Medicine	Sunnyvale
A. B., Stanford, 1914.		
Misrow, Jogesh Chander	Economics	Calcutta, India
A. B., University of Washington, 1913.		
Missner, Frank Roy Stewart	Medicine	San Francisco
A. B., Stanford, 1914.		
Moffat, James Stanley	Law	Birmingham, Ala.
A. B., Chicago, 1912; J. D., Stanford, 1915.		
Moore, Neil Preston	Chemistry	Palo Alto
A. B., Stanford, 1914.		
Morin, Harriette Lucile	Botany	San Francisco
A. B., Stanford, 1914.		
Morrison, Harold	Entomology	Indianapolis, Ind.
A. B., Cornell, 1914.		
Morton, Frank Willard	German	San Francisco
A. B., Stanford, 1914.		
Mosher, Hugh Harold	Chemistry	San Jose
A. B., Stanford, 1913, A. M., 1914.		
Mukaiyama, Masaha P.	Mathematics	Hiroshima, Japan
A. B., College of Pacific, 1914.		
Mukerji, Dhan Gopal	Philosophy	Palo Alto
A. B., Stanford, 1914.		
Murray, Virginia	Medicine	San Gabriel
A. B., Stanford, 1914.		
Nakayama, Shonosuke	Entomology	Tokyo, Japan
A. B., Stanford, 1914.		
Naylor, Sarah Rhoda	English	Holton, Kas.
A. B., Kansas, 1912.		
Neal, Roland	Chemistry	San Jose
A. B., Cornell College, 1904, A. M., 1907.		
Nichols, Bernard Charles	Law	El Centro
A. B., Stanford, 1900.		
Nichols, Charles Fenton	Law	San Francisco
A. B., Stanford, 1913.		
Niebel, Herbert Lee	Civil Engineering	Cleveland, Ohio
A. B., Stanford, 1914.		

Nielsen, John William	Medicine	San Luis Obispo
A. B., Washington State College, 1911.		
Noddin, Ralph Ernest	Botany	Los Gatos
B. S., California, 1912.		
Nomura, Hanji	English	Kobe, Japan
A. B., Stanford, 1914.		
Nowell, Patterson Dana	Law	Tulare
A. B., Stanford, 1913.		
Nusbaum, Emanuel Rhodes	Greek	Colton
A. B., Stanford, 1914, A. M., 1915.		
Olsen, Louis	Civil Engineering	Palo Alto
A. B., Stanford, 1914.		
Otis, Arthur Sinton	Education	Pasadena
A. B., Stanford, 1910.		
Owen, Ethel	Medicine	Los Gatos
A. B., Stanford, 1914.		
Packard, Henry Jessup	Geology	Ontario
A. B., Stanford, 1911.		
Paulson, John Edwin	Medicine	San Francisco
A. B., Stanford, 1914.		
Paulson, Myrtle Nina	Botany	Minneapolis, Minn.
A. B., Stanford, 1914.		
Peck, Sedley Clarendale	Economics	San Mateo
A. B., Stanford, 1913.		
Peebles, James Ernest	Law	Berkeley
A. B., Stanford, 1914.		
Phillips, Alfred Liles	Medicine	Santa Cruz
A. B., Stanford, 1913.		
Plummer, Edna	Mathematics	San Jose
A. B., Stanford, 1914.		
Potts, William Andrew	Electrical Eng.	Adelaide, S. Aus.
B. E., Adelaide, 1913.		
Pratt, Helen Louise	Zoology	Palo Alto
A. B., Stanford, 1915.		
*Prescott, Basil	Geology	El Paso, Tex.
A. B., Stanford, 1908, A. M., 1915.		
Price, Francis	Law	Palo Alto
A. B., Stanford, 1914.		
Price, Merton James	Medicine	San Francisco
A. B., Stanford, 1913.		
Pruett, Harry Jeroam	Medicine	Pomona
A. B., Stanford, 1912.		
Rae, Arthur Evans	Education	Palo Alto
B. S., Illinois, 1907.		

Rae, Lillian Mary A. B., Albion, 1910.	English	Palo Alto
Ray, Hoyt Everett A. B., Cornell, 1913.	Law	Provo, Utah
Ray, James Chandler A. B., Stanford, 1914, A. M., 1915.	Geology	Palo Alto
Read, Jay Marion B. S., California, 1912, M. S., 1913.	Medicine	San Francisco
Read, William A. B., Stanford, 1909.	Civil Engineering	San Francisco
Reining, Charles A. B., Stanford, 1908; A. M., Harvard, 1911.	German	Davenport, Ia.
Reynolds, John Lynn A. B., Stanford, 1912.	Mechanical Eng.	Los Angeles
Rich, Willis Horton B. S., Lombard, 1905; A. B., Stanford, 1909.	Zoology	Lancaster
Roberts, Richard Evan A. B., Stanford, 1914.	Law	Redlands
Robinson, George Frazier B. S., South Carolina, 1914.	Geology	Columbia, S. C.
Ross, George Paul A. B., Stanford, 1915.	Law	Lakeview, Ore.
St. John, William Errle A. B., Oregon, 1912.	Education	Palo Alto
Salomon, Edward B. S., California, 1913.	Medicine	San Francisco
Sappington, Clarence Olds A. B., Whitman, 1911.	Physiology	Palo Alto
Schaupp, Karl Ludwig A. B., Stanford, 1913.	Medicine	Santa Rosa
Scudder, Benjamin H. A. B., Illinois, 1900, Ph. M., Chicago, 1901.	Education	Glendale, Ariz.
Sears, Harry Johnson A. B., Stanford, 1911, A. M., 1912.	Chemistry	Palo Alto
Sears, Horace Holmes B. S., Dartmouth, 1900.	Law	Redwood City
Shamberger, Jacob Casper A. B., Western Maryland, 1904; A. M., Stanford 1914.	Latin	Payette, Idaho
Shands, Julia Bell A. B., Southwestern, 1904.	English	San Marcos, Tex.
Sharp, Leslie Harrison A. B., Lake Forest, 1912.	Chemistry	Albany, Ore.
Sharp, Sidney J. W. A. B., Stanford, 1914.	Law	Hanford

Sharpe, Otis Allen B. S., California, 1912.	Medicine	Hynes
Shaw, Carl Raymond A. B., Stanford, 1914.	Civil Engineering	Salt Lake City, U.
Shaw, William Thomas B. Agr., Minnesota, 1898, B. S., 1899; M. S., Mich. Agr. Col., 1901.	Zoology	Pullman, Wn.
Shea, Timothy Thomas A. B., Stanford, 1914.	Medicine	San Francisco
Single, Forrest Edwin A. B., Stanford, 1914.	Law	Stockton
Small, Horatio Leverett A. B., Stanford, 1911.	Geology	Palo Alto
Smallwood, Walter Charles B. S., California, 1913.	Medicine	Richmond
Smith, Edgar Clarence A. B., Stanford, 1913.	Law	Azusa
Smith, Elmer William A. B., Stanford, 1912.	Medicine	San Francisco
Smith, Felita Mary A. B., Stanford, 1912.	History	Fresno
Smith, Harold Fred A. B., Stanford, 1907.	Education	Chefoo, China
Smith, Harry James A. B., Stanford, 1912.	Medicine	Ferndale
Smith, Leslie Gaines A. B., Stanford, 1914.	Education	San Jose
Smith, Mary Morgan A. B., Vassar, 1910; A. M., Stanford, 1915.	Latin	Los Gatos
Smith, Mildred A. B., Stanford, 1914.	German	Ferndale
Snead, Albert Charles A. B., Vanderbilt, 1903.	Education	Palo Alto
Snell, Elizabeth Burritt A. B., Stanford, 1908.	Education	Palo Alto
Snell, Joel Andrew A. B., Stanford, 1901.	Education	Palo Alto
Spence, Homer Roberts A. B., Stanford, 1913.	Law	Alameda
Stafford, Kathleen A. B., Stanford, 1913.	Latin	San Jose
Stammer, Walter Henry A. B., Stanford, 1914.	Law	San Jose
Stearns, Edna Adele A. B., Stanford, 1914.	History	Oakdale

Stephens, Charles Henry A. B., College of Pacific, 1914.	Philosophy	Mayfield
Stevens, John Egbert B. S., Occidental, 1913.	Medicine	Butte City
Stevens, Verne Genoa A. B., Stanford, 1913.	Entomology	Palo Alto
Stevick, Anna Laura A. B., Stanford, 1914.	English	Palo Alto
Strickler, John Philip A. B., Stanford, 1913.	Medicine	San Diego
Swain, Albert Free A. B., Stanford, 1915.	Entomology	Los Angeles
Swan, Guy Carleton A. B., Stanford, 1914.	Chemistry	Lawrence, Mass.
Swickard, James Blaine A. B., Stanford, 1910.	Civil Engineering	San Jose
Swingle, Clarissa Winifred A. B., Stanford, 1915.	Education	Long Beach
Taylor, Arthur A. B., Stanford, 1912.	Civil Engineering	Los Angeles
Taylor, Mildred A. B., Occidental, 1914.	Latin	Santa Ana
Teeter, Arthur Lewis A. B., Indiana, 1911.	Medicine	Palo Alto
Teeter, Belva Pearl Stone A. B., Indiana, 1913.	English	Palo Alto
Thompson, Thomas West A. B., Stanford, 1912.	Geology	Palo Alto
Thompson, William Francis A. B., Stanford, 1911.	Zoology	Stanford University
Todd, Katherine Frances A. B., Stanford, 1915.	Philosophy	Oakland
Tognazzini, Irene Amanda A. B., Stanford, 1913.	Medicine	Cayucos
Trimble, Fred Matlack B. S., Pennsylvania State College, 1914.	Entomology	Northbrook, Pa.
Tsuzaki, Mitsuji A. B., Stanford, 1914.	Economics	Kumamoto, Japan
Tulloch, Leslie Sutherland A. B., Stanford, 1914.	Zoology	Kohala, T. H.
Tully, Wilford Hamilton A. B., Stanford, 1915.	Law	San Jose
Vail, Helen A. B., Stanford, 1914.	Economics	Palo Alto

Valentine, Jean Mae A. B., Stanford, 1914.	English	Los Angeles
Van Sicklen, William John A. B., Stanford, 1912, A. M., 1913.	Chemistry	Palo Alto
Veazey, Mildred Virginia A. B., Missouri, 1914.	English	Dardanelle, Ark.
Viau, Benjamin Harrison B. S., California, 1912.	Medicine	Sanger
Walther, Christine A. B., College of Pacific, 1914.	English	Oakdale
Waring, Clarence Almon A. B., Stanford, 1911, A. M., 1914.	Geology	San Francisco
Watanabe, Walter A. B., Stanford, 1914.	Chemistry	San Francisco
Watkins, Fred Bradshaw A. B., Stanford, 1914.	Chemistry	Los Angeles
Welin, Albert Fabian B. S., California, 1912.	Medicine	San Francisco
West, Howard Frank A. B., Stanford, 1912.	Medicine	Los Angeles
Wetmore, Clyde T. A. B., Stanford, 1913.	Medicine	San Francisco
Weymouth, Frank Walter A. B., Stanford, 1909, A. M., 1911.	Zoology	Palo Alto
Whiting, Woodson A. B., Grinnell, 1912.	History	Whiting, Iowa
Wiggins, John Henry A. B., Stanford, 1911.	Civil Engineering	Geneva, Kas.
Wilcox, Robert William A. B., Stanford, 1913.	Medicine	Delta, Colo.
Will, Elsa Barbara A. B., Stanford, 1913.	Medicine	Rochester, N. Y.
Williams, J. Harold A. B., Stanford, 1913, A. M., 1914.	Education	Ainsworth, Neb.
Winn, Vera Lutitia A. B., Stanford, 1915.	Greek	Palo Alto
Wirt, Charlotte A. B., Stanford, 1900.	German	Santa Rosa
Wolcott, Herbert Betts A. B., Stanford, 1915.	Economics	Carthage, Mo.
Wood, W. Welcome B. S., Huron, 1909.	Medicine	Interior, S. D.
Worthy, Elmer Thomas A. B., Stanford, 1914.	Law	Santa Ana

Wyckhoff, Harry Alphonso A. B., Stanford, 1907.	Medicine	San Francisco
Wyman, Eleanor McKee A. B., Stanford, 1914.	Greek	Fillmore
Yager, John Edgar A. B., Stanford, 1915.	Mechanical Engineering	Oakland
Yoshimura, Manji Gakushi, Tokyo, 1908.	Chemistry	Tokio, Japan
Zeidler, Richard Ph. B., Wisconsin, 1906; M. L., California, 1912.	Education	Campbell
Zimmerman, Howard K. A. B., Oregon, 1913.	Law	Salem, Ore.

SUMMARY

Candidates for the Degree of Master of Arts.....	125
Candidate for the Degree of Engineer.....	21
Candidates for the Degree of Juris Doctor.....	51
Candidates for the Degree of Doctor of Medicine.....	65
Candidates for the Degree of Doctor of Philosophy.....	29
Not Candidates for Advanced Degrees.....	36
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Total Graduate Students.....	327